

Descriptions and Records of Fishes

By GILBERT P. WHITLEY, F.R.Z.S.

(Figures 1-12.)

(Contribution from The Australian Museum.)

Family ALBULIDAE.

Genus ALBULA Scopoli, 1777.

ALBULA VULPES NEOGUINAICA Cuv. & Val., 1846.

Albula vulpes (Linnaeus) McCulloch, Austr. Mus. Mem. v, 1929, p. 35 (refs. & synon.).

Albula neoguinaica Whitley, Austr. Zool. ix, 1940, p. 398, fig. 2.

One (Austr. Mus. regd. No. IB.3753) from Darwin, presented by Mr. T. Milner, constitutes a new record for the Northern Territory.

Family CYPRINIDAE.

Genus RASBORA Bleeker, 1860.

Rasbora Bleeker, Nat. Tijdschr. Ned. Ind. xx, 1860, p. 435. Genus *coelebs*. Tautotype, *Cyprinus rasbora* Buchanan, Fish. Ganges 1822, p. 329, pl. ii, fig. 90, according to Jordan's Genera of Fishes, but Bleeker (Atlas Ichth. iii, 1863, p. 28) selected *R. cephalotaenia* Bleeker.

RASBORA LABUANA, sp. nov.

(Figure 1.)

D. 2, 7; A. 3, 5; P. i. 12; V. 2, 7; C. 17 branched rays. L. lat. 29. Tr. $\frac{1}{4}/1/2\frac{1}{2}$. Sc. round caudal peduncle, 12. Predorsal sc. 12. Preventral sc. 11.

Lower jaw scarcely projecting. Predorsal profile bowed. Form compressed. Head (11 mm.) 3.8, depth (11) 3.8 in standard length (42). Depth of caudal peduncle (6) 1.5 in its length (9). Interorbital (5) 2.2, eye (4) 2.7, snout (4) 2.7 in head. Dorsal (9) 1.2 in body-depth, its origin two scales behind insertion of ventrals, equidistant from ventrals and anal, and over 10th scale of L. lat. Anteriorly projected dorsal-hypural distance falling over front of eye. Anal (9) 1.2 in body-depth. Fins obtusely rounded. Pectoral (10 mm.) reaching anterior ventral rays, whose tips reach anal origin. Lateral line complete.

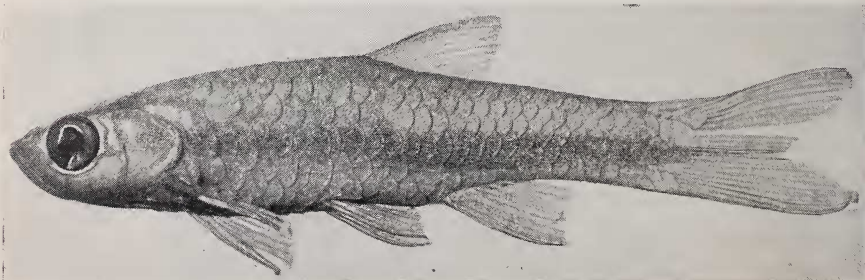


Figure 1.—Labuan Rasbora, *Rasbora labuana*. Type from Labuan.

Photo.—Dr. A. A. Racek.

Colour, in alcohol, straw yellowish, without dark reticulations; fins lighter, plain. A dull grey stripe along middle of back before dorsal fin. Eye blue. An irregular broad dusky grey band extends from gill-opening to tail; its upper margin is ragged or festooned; it is broadest (equal to depth of cheek) about the lower half of the caudal peduncle and narrows to a stripe along middle caudal rays; it crosses all the lateral line tubes except for eight of these above ventral fins. Apparently no light lateral stripe over the dark band. No supra-anal band.

Total length of holotype, 55 mm. A smaller paratype is similar but has some infuscation on dorsal fin, traces of a dark stripe along sides of head, and 12 instead of 11 pre-ventral scales. Australian Museum regd. No. IB.1429.

Loc.—Labuan, off Borneo; presented in 1945 by Flying Officer P. H. Durie who considered it a potential mosquito-destroyer.

Differs from Buchanan's figure of the type-species, *R. rasbora*, in having no dip in the profile over the eye, lower caudal lobe less produced; no dusky caudal marginal, more numerous scales and differs also in the form of the lateral band as described above. The new species is distinguished by its coloration and squamation from the various Malayan ones discussed by Brittan (Bull. Raffles Mus. Singapore, xxv, 1954, p. 129). The colour-pattern is similar to that of *R. einthoveni* in Bleeker's Atlas, but the dark lateral band is straighter, broader, and has its upper edge ragged.

Family LEPTOCEPHALIDAE.

Genus FORSKALICHTHYS Whitley, 1935.

FORSKALICHTHYS NOORDZIEKI (Bleeker).

(Figure 2.)

Conger noordzieki Bleeker, Act. Soc. Sci. Ind. Neerl. Amboyna ii, 1857, p. 86. Amboina (fide Weber & Beaufort, Fish. Indo-Austr. Archip.).

Here figured from a specimen 456 mm. or 18 inches long, from Murray Island, Queensland; the inset shows upper teeth and labial grooves. The teeth are small, uniserial along sides, incisorlike, and there are no teeth outside the closed mouth. Having the dorsal origin above the pectoral instead of behind it, this fish agrees better with Bleeker's species than *cinereus* (Ruppell, 1831) of which the former has sometimes been regarded as a synonym.



Figure 2.—Conger, *Forskalichthys noordzieki*. Queensland.

G. P. Whitley del.

Family ECHELIDAE.

Genus MURAENICHTHYS Bleeker, 1864.
MURAENICHTHYS GODEFFROYI Regan.

(Figure 3.)

Muraenichthys godeffroyi Regan, Ann. Mag. Nat. Hist. (8) iv, Nov. 1, 1909, p. 439. Bowen, Queensland. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 135 (listed). *Id.* Schultz & Woods, Journ. Wash. Acad. Sci. xxxix, 1949, p. 172 (in key). *Id.* Munro, Fisher. Newsletter xvi, 5, May 1957, p. 16; Handbook Austr. Fish. xi, p. 46, No. 328.

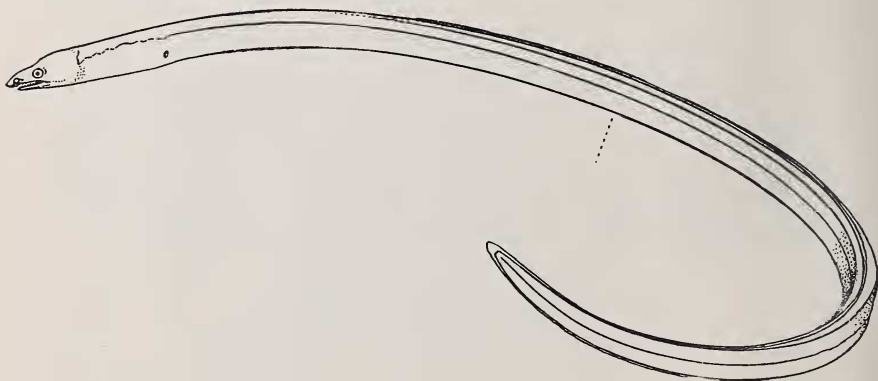


Figure 3.—Worm Eel, *Muraenichthys godeffroyi*. Holotype. Queensland.
A. Fraser-Brunner del.

Some years ago, Mr. A. Fraser-Brunner kindly made the drawing of the holotype in the British Museum from which the accompanying illustration is taken.

Family MURAENIDAE.

Genus FIMBRINARES Whitley, 1948.

FIMBRINARES MOSAICA Whitley.

(Figure 4.)

Fimbrinares mosaica Whitley, Rec. Austr. Mus. xxii, 1948, p. 72. Point Banks, New South Wales.

The holotype of this species is still unique and is here figured for the first time.

Genus LYCODONTIS McClelland, 1844.

Genus LYCODONTIS LONGINQUUS Whitley.

(Figure 5.)

Lycodontis longinquus Whitley, Rec. Austr. Mus. xxii, 1948, p. 73. Mackay, Queensland.

Here illustrated from the holotype.

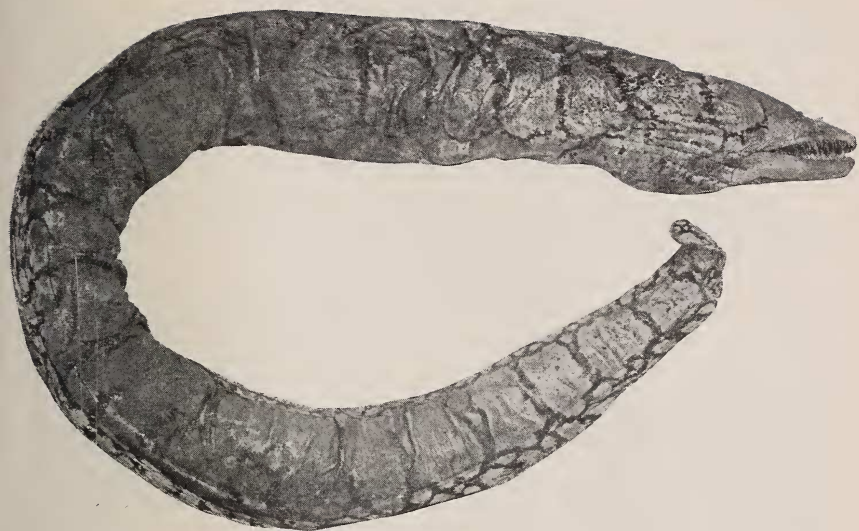


Figure 4.—Reef Eel, *Fimbrinares mosaica*. Holotype. New South Wales.
G. C. Clutton photo.

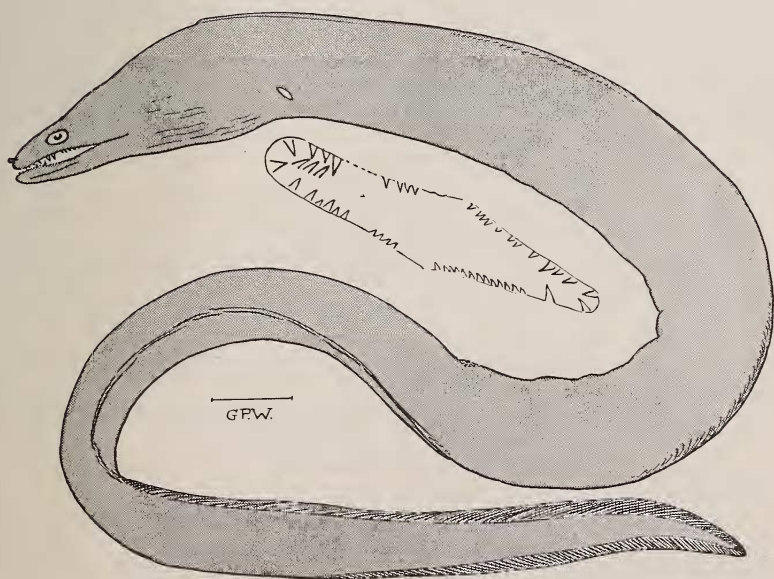


Figure 5.—Moray, *Lycodontis longinquus*. Holotype. Queensland.
G. P. Whitley del.

Family EVERMANELL.

Genus EVERMANELLA Fowler, 1901.

EVERMANELLA BORODINI, sp. nov.

Odontostomus balbo atlanticus Borodin, Bull. Mus. Comp. Zool. lxxii, 3, 1931, p. 78.

Anticipated by *Evermannella atrata atlantica* Parr, Bull. Bingham Ocean. Coll. iii, 3, 1928, pp. 7, 163, and 166.

Since *Odontostomus* is preoccupied and has been made a synonym, of *Evermanella*, it follows that Borodin's name is anticipated; and I accordingly rename his species *borodini*.

Family STROMATEIDAE.

Genus SERIOLELLA Guichenot, 1849.

SERIOLELLA NOEL, sp. nov.

D. x (+?, injured), 31; A. 2, 30; P. 14; V. i, 5; C. 15 main rays.

L. lat. circa 95 to hypural joint + 8 or so to tail.

Head (91 mm.) 3.6, depth (100) 3.3 in standard length (331).

Eyes (20 to 22) 4.1 to 4.5 in head. Gill-rakers 8/16 (incl. 2 rudiments).

Top of head and predorsal area naked, gelatinous. Mouth not reaching eye. Very fine teeth on jaws, none on vomer or palatines. Nostrils near tip of snout. Maxillary slipping under preorbital.

Body robust, elongate, without conspicuous pores.

L. lat. follows curve of back with about 95 tubes to hypural joint + 8 to base of tail, just over a hundred altogether. Dorsal with at least ten spines, lower than lobe of dorsal fin. Pectorals slightly falcate, 38 mm. long, not reaching level of dorsal rays or vent, and with fewer rays than usual in the genus.

Dark purplish grey above gradating to silvery grey below. Coloration uniform; no conspicuous dark spot behind head or on body. Fins dark brownish-grey. Inside of gill-openings blackish. Inside of mouth leaden grey. Pupil greyish blue. Iris grey with silvery and coppery areas.

Described from the unique holotype, Austr. Mus. regd. no. IB.3890, a specimen 15 inches overall and 2 lb. in weight.

Locality: Beauty Point, Middle Harbour, near Sydney, New South Wales; December 17, 1957. Mr. Basil Davidson.

Distinguished by its fin-counts, reduced pectorals, coloration, etc., from its congeners:—

ampla Griffin, Trans. N. Zeal. Inst. lix, 1928, p. 376, pl. lviii, fig 3. New Zealand.

antarctica Carmichael, Trans. Linn. Soc. Lond. xii, 1819, p. 501, pl. xxv. Tristan da Cunha.

brama Gunther, Cat. Fish. Brit. Mus. ii, 1860, p. 390. New Zealand (syn. *Neptonemus travale* Castelnau, 1872)

caerulea Guichenot in Gay, Hist. Chili (Peces), ii, 1849, p. 242. Juan Fernandez Id.

christophersenii Silvertsen, Res. Norweg. Exp. Tristan da Cunha, xii, 1945, p. 23, pl. i, fig. 16. Tristan da Cunha.

crassa Starks, Proc. U.S. Nat. Mus. xxx, 1906, p. 784, fig. 8, Callao. Peru.

dobula Gunther, Proc. Zool. Soc. Lond. 1869, p. 429. Tasmania.

maculata Forster, Neuesten Reisen i, 1794, Tagebuch White, p. 131-132, No. 7. New South Wales. (Syn. *Scomber punctatus* Bloch and Schneider, 1801 and *Neptonemus bilineatus* Hutton, 1872.)

porosa Guichenot in Gay, Hist. Chili (Peces), ii, 1849, p. 239, pl. vii, fig. 2. Chile.

velaini Sauvage, Arch. Zool. Exper. viii, 1879, p. 32, pl. i, fig. 2. St. Paul.

violacea Guichenot in Gay, Hist. Chili (Peces), ii, 1849, p. 241, pl. vii. Chile.

Family MELANOTAENIIDAE.

Genus ANISOCENTRUS Regan, 1914.

ANISOCENTRUS CAMPSI Whitley.

Anisocentrus campsi Whitley, Rec. Austr. Mus. xxiv, 1956, p. 26, fig. 1. Jimmi River, New Guinea.

Centratharina tenuis Nichols, Amer. Mus. Novit. 1802, 1956, p. 1, fig. 1. Kondiu, Wahgi Valley, New Guinea.

Nichols' species is evidently a synonym of mine, of earlier date, his name having been published December 7th and mine November 23rd, 1956. The few discrepancies in our descriptions may be accounted for by variation.

Family MENIDAE.

Genus MENE Lacepede, 1803.

MENE MACULATA (Bloch & Schneider).

Zeus maculatus Bloch & Schneider, Syst. Ichth., 1801, p. 95, pl. xxii. Tranquebar.

Mene anna-carolina Lacepede, Hist. Nat. Poiss. v, 1803, p. 479. Based on a Chinese painting ceded to France by Holland.

Meneus Rafinesque, Anal. Nature, 1815, p. 88.

Mene maculata of modern authors. *Id.* McCulloch, Mem. Qld. Mus. vii, 1922, p. 241, pl. xiv, fig. 2 (Queensland).

This remarkable fish, for which I suggest the popular name Razor Trevally, may now be recorded from New South Wales since Mr. H. W. Lane of Ballina preserved a specimen from the estuary of the Richmond River in July 1957 (Austr. Mus. regd. No. IB.3784).

Family CHANDIDAE.

Genus GYMNOCHANDA Fraser-Brunner, 1954.

GYMNOCHANDA FILAMENTOSA Fraser-Brunner.

Gymnochanda filamentosa Fraser-Brunner, Bull. Raffles Mus. xxv, 1954, p. 210, fig. 4. Southern Malaya.

Ambassis lala Todd, Tropical Fish Book (Fawcett Book 307), 1956, p. 124, fig. Not *Chanda lala* Hamilton Buchanan, Fish. Ganges, 1822, 114, pl. xxi, fig. 39.

Gymnochanda filamentosa (as a new genus and species) Boeseman, Zool. Meded. xxxv, 7, 1957, p. 75, pl. iii. Singapore.

Boeseman's homonym is also a synonym of Fraser-Brunner's name for the Glass Angel Fish of the aquarists.

Family APOGONIDAE.

Genus APOGON Lacepede, 1802, s. 1.

APOGON NOUMEAE, sp. nov.

D. vii/i, 10; A. ii, 9; P. i, 13-14; L. lat. c. 20 to hypural; Tr. 2/1/7; Predors. 3.

Head (27 mm.) 2.4, depth (27) 2.4 in standard length (67).

Eye (10) 2.7 in head; snout (8), and interorbital (8) 3.3; length of

upper jaw (12) 2.2; least depth of caudal peduncle (11) 2.4 in head. Longest pectoral ray (18) 3.7 in standard length.

Anterior nostril with tube, posterior a pear-shaped opening. Teeth villiform, no canines, present in irregular rows on vomer and along palatines. Tongue rounded. Anterior margin of preoperculum entire, posterior margins serrated. Suborbital entire, also maxillary, which reaches below pupil. Less than 20 gill-rakers on first gill arch, many longer than gill-filaments.

Form rather deep and compressed. No silvery gland. Lateral line complete. Scales ctenoid, with about 12 basal crenulations, deciduous. Caudal peduncle nearly a quarter of standard length.

Third dorsal spine longest (16 mm.), slightly longer than spine in front of second dorsal fin. Two dorsal fins separate. Ventral rays reach second and spine. Caudal fin bilobed.

Colours in formalin: Ground-colour creamy yellow finely punctulated with brownish grey. Head more densely infuscated with ill-defined oblique dusky bars from eye across preopercle. Body with several irregular blotches of purplish to brownish grey colour; the first descends from spinous dorsal base to behind pectoral fin in a wedge tapering below, the second is ill-defined below the second dorsal and has a horizontal similar bar below it and above the dusky area over anal base; the last dark blotch occupies most of the back and posterior part of the caudal peduncle. The wedge-like first bar and the horizontal one below the second have milky reflections. Pectoral base infuscated but not dark or dusky. Most of the fins (except the white pectorals) very dark greyish brown tending to form a black blotch on the middle soft rays of the dorsal fins. The dark fins have lighter areas near their bases. Eye blue. Inside of mouth pale greenish.

Described from the unique holotype, a specimen slightly more than $3\frac{1}{2}$ inches long, from Noumea, New Caledonia, from Dr. R. Catala's Aquarium Austr. Mus. regd. No. I.B. 3844.

Distinguished from its congeners in the above combination of characters.

Perhaps nearest *A. novaeguineae* Valenciennes (Nouv. Ann. Mus. Hist. Nat. Paris, i, 1, May, 1832, p. 53, pl. iv, fig 1), but has more fin rays and blotched coloration.

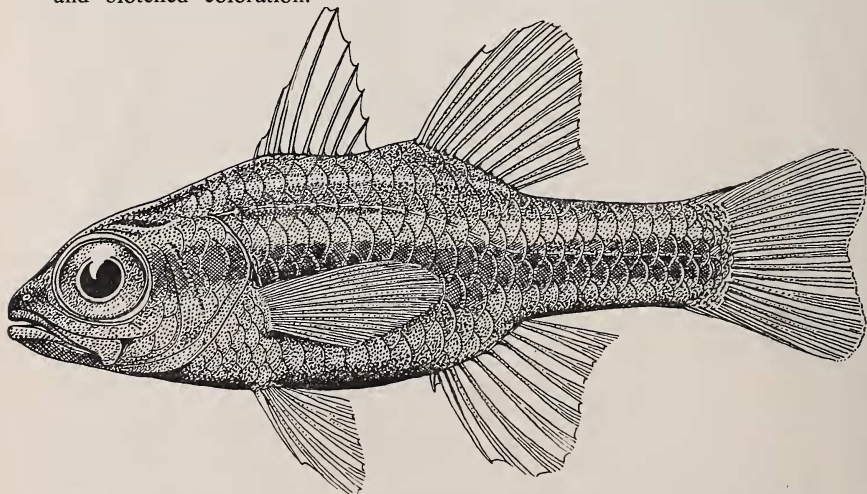


Figure 6.—Black Soldier Fish, *Apogon aterrimus*. Holotype. Queensland.
A. Fraser-Brunner del.

APOGON ATERRIMUS Gunther.

(Figure 6.)

Apogon aterrimus Gunther, Ann. Mag. Nat. Hist. (3) xx, July 1, 1867, p. 58. Cape York, Queensland. *Id.* Macleay, Proc. Linn. Soc. N. S. Wales v, 1881, p. 346; Descr. Cat. Austr. Fish. i, 1881, p. 46. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 146.

Figure 6 was made from the still unique holotype of this species in the British Museum (Natural History) by Mr. A. Fraser-Brunner and is the first illustration thereof.

Family MALACANTHIDAE.

Genus MALACANTHUS Cuvier, 1829.

MALACANTHUS HOEDTI Bleeker.

Malacanthus hoedti Bleeker, Act. Soc. Sci. Indo-Neerl. vi, 1859, p. 18. New Guinea. *Id.* Marshall, Ich. Notes i, 3, 1957, p. 121. And of authors.

This species was recorded from Australia for the first time by Marshall (1957), from off Cape Moreton, Queensland. It occurred in New South Wales many years ago, a drawing of one captured on a line at Byron Bay having been so identified by the late A. R. McCulloch in 1914.

New record for New South Wales. The Australian Museum has specimens from Nauru, Bali and Lord Howe Island.

Family AMPHIPRIONIDAE.

Genus AMPHIPRION Bloch & Schneider, 1801.

AMPHIPRION CHRYSOGASTER Cuv. & Val.

Amphiprion, chrysogaster Cuvier & Valenciennes, His. Nat. Poiss. v, July, 1830, p. 400. Bourbon (type) & Mauritius. *Id.* Schultz, Proc. U.S. Nat. Mus. ciii, 1953, p. 193, pl. ix, fig. E (q.v. for refs. & synonym.).

One specimen, 43 mm. long (Austr. Mus. regd. No. 1B. 3893), from Heron Island, Capricorn Group, Queensland, given to Mr. Harold Cogger by an aqualung diver who obtained it in more than 15 feet of water over the reef edge on December 31, 1956.

New record for Australia.

Family CALLYDONTIDAE.

Genus CETOSCARUS Smith, 1956.

Cetoscarus Smith, Rhodes Univ. Ichth. Bull. i, Jan. 1956, pp. 4 & 16. Orthotype, *Scarus pulchellus* Ruppell.

CETOSCARUS BICOLOR (Ruppell).

(Figure 7.)

Scarus bicolor Ruppell, Atlas zu Ruppell (Senckenberg. Nat. Ges.), Fische 15, 1829, p. 82, pl. xxi, fig. 3. Djetta, Red Sea.

? *Scarus lunulatus* Cuvier & Valenciennes, Hist. Nat. Poiss. xiv, 1839, p. 268. Red Sea. And as *bicolor* on p. 196.

Petronason bicolor Swainson, Nat. Hist. Classif. Fish. Amph. Rept. ii, 1839, p. 226.

Pseudoscarus nigripinnis Playfair, Fish. Zanzibar, 1866, p. 105, pl. xv, fig. 2. Zanzibar.

Pseudoscarus bicolor Bleeker, Atlas Ichth. i, 1862, p. 33, pl. xiv. *Id.* Weber, Rept. Siboga Exped., Fische, 1913, p. 384.

Callyodon bico'or Fowler & Bean, Bull. U.S. Nat. Mus. 100, vii, 1928, p. 496 (refs. & synon.). *Id.* Marshall, Ichth. Notes i, 1951, p. 5 (Mackay, Q.).

Scarus ophthalmistius Herre, Copeia 1933, p. 21. Jolo, Philippines.

Cetoscarus bicolor Smith, Rhodes Univ. Ichth. Bull. i, 1956, p. 17, pl. xlv, figs. C, D, & E.



Figure 7.—Young Parrot Fish, *Cetoscarus bicolor*. New Caledonia.
Photo.—A. A. Racek.

Here figured from a juvenile, 28.5 mm. in standard length or $1\frac{3}{8}$ in. overall (formalin specimen No. 1B.3830) from the aquarium at Noumea, New Caledonia (Dr. R. Catala). Another example trebled the size of this one yet retained the juvenile coloration, which is like that shown on Smith's plate xlv, fig. C.

Fishes with prominently marked opercular regions, popularly regarded as being like a face bandaged for toothache, are unusual and are sometimes associated with coelenterates. Whether *Cetoscarus bicolor* has any preference for the vicinity of corals or sea-anemones is not known, but *Amphiprion* and *Acinicola* are commensal with anemones, Franz's "Seranidae nov. spec." (Abh. Akad. Wiss. Munchen, Suppl. Bd. iv, 1911, p. 42, pl. 1) is symbiotic with the soft coral *Astraea*, and *Tetradrachmum* favours certain corals. Other fishes with conspicuous light opercula are juvenile *Promicrops*, some *Scolopsis* such as *vosmeri* and some young *Coris*.

J. L. B. Smith (Ichth. Bull., Rhodes Univ. 8, 1957, p. 118) remarked of "*Coris greenovii*" juveniles of *Coris formosa* and *C. gaimard africana*, "at rest on the bottom they exactly resemble fragments of shell and are difficult to recognise as fishes except at close range."

Family CORIDAE.

Genus GUNTHERIA Bleeker, 1862.

Guntheria Bleeker, Proc. Zool. Soc. London 1861 (April 7, 1862), p. 413; Versl. Akad. Amsterdam xiii, 1862, p. 101. Orthotype, *Halichoeres coeruleovittatus* Ruppell, Neue Wirbelth. Abyssin., Fisch, 4, 1835, p. 14, pl. iv, fig. 1, from Djetta, Red Sea.

The type-species differs from the new one to be described below in having the ventral fins reaching farther back, caudal truncate, in its coloration (large red blotches on head joined to zigzag marks on body) and is of larger size (about 7 as against about $3\frac{1}{2}$ inches long).

Key to Australian species of *Guntheria*:—

- A. A dark zigzag band from below eye to behind soft dorsal fin
Guntheria ziczac (De Vis, 1885)
- AA. No zigzag band.
- B. Small scales on cheeks and large scales on opercles. Pale yellow with olive band along upper sides; oblique dusky bars through eye; small dark blotch on side near tip of pectoral; black spot on upper part of root of tail *devisi* Whitley, 1941
- BB. Patch of scales over upper part of operculum. Greenish to yellowish with diffuse dark blotch on side and a smaller dark spot on upper portion of caudal peduncle
trimaculata (Griffith, 1834)
- BBB. A few vestigial scales behind eye over opercle. No dusky spots or bars *vestalis*, sp. nov.

GUNTHERIA VESTALIS, sp. nov.

D. ix, 11; A. iii, 10; P. 14; L. Lat. 27. Tr. 2/1/9. About 10 small predorsal scales reaching about level of eye.

Head (25 mm.) 3.2, depth (23.5) 3.5 in standard length (80). Eye (5) 5, interorbital (6) 4.1 in head.

Head practically naked, only a few vestigial scales behind eye over opercle. Curved canines not flaring outwards, four in front of upper and lower jaws; a couple of smaller canines behind those of upper jaw anteriorly. Lateral teeth uniserial. Two posterior canines. Lips normal. Preopercular margin entire. Gill-membranes united to each other and to isthmus. Form rather deep, compressed. Thoracic scales not enlarged.

L. lat. continuous, bent behind. No scaly sheaths to dorsal and anal fins. Dorsal spines not elevated, their membranes penicillate, the front spines not divergent. Ventrals pointed, reaching four scales from the vent. Pectorals rounded, upper rays longest. Caudal rounded.

Colours in life (*teste* Mr. T. C. Marshall): "General colour light olive above, whitish below, each scale with a slightly crescentic bar: an orange bar from snout to eye, another below eye and some orange spots behind eye and on top of head: a bright canary-yellow spot, as big as eye, on caudal peduncle: dorsal hyaline pink with vermiculations of pale orange; caudal similar but very pale: a very small black spot at base of pectoral."

Described from the holotype, 94 mm. or about 3½ inches long. Registered No. 1229 in the Department of Harbours and Marine, Brisbane, Queensland, submitted to me for report in 1952.

Locality.—Lady Musgrave Island, Queensland.

Family SARDIDAE.

Genus PARATHUNNUS Kishinouye, 1923.

Parathunnus Kishinouye, Journ. Coll. Agric. Univ. Tokyo viii, 1923, pp. 433 & 442. Haplotype, *Thunnus mebachi* Kishinouye.

PARATHUNNUS MEBACHI Kishinouye.

Thunnus mebachi Kishinouye, Sui. Gak. Ho i, 1915, p. 19, pl. i, fig. 11. Japan.

Parathunnus mebachi Kishinouye, Journ. Coll. Agric. Univ. Tokyo viii, 1923, p. 442, figs. 4, 22, 47 & 49. *Id.* Fowler, Proc. Amer. Philos. Soc. lxxxii, 1940, p. 764, fig. 43. *Id.* Godsil & Byers, Calif. Fish. Bull. lx, 1944, p. 3, figs. 1 et seq. *Id.* Munro, Ich. Notes i, 3, 1957, p. 145, fig. 1. *Id.* Collier, Anglers' Digest Shooters' Monthly (Sydney), Dec. 1957, p. 7.

This species may be added to the New South Wales list as Mr. Bert Collier has sent me notes and a photograph of it from off Coff's Harbour.

He observed these Big-eyed Tuna from February to April in various years since 1939. They are of an "old lead" colour, with yellow finlets, and reach about 12 lb. in weight. Japanese fishermen catch this species off the eastern Australian coastline.

Family SYNAPTURIDAE.

Genus TRICHOBRACHIRUS Chabanaud, 1937.

Trichobrachirus Chabanaud, Mem. Inst. Egypte XXXII, 1937, p. 47; Bull. Mus. Hist. Nat. Paris (2) xv, 1943, p. 292. Orthotype, *Synaptura villosa* Weber, 1908, from southern New Guinea.

The following species is tentatively ascribed to this genus pending detailed osteological study for which sufficient specimens are not available. It seems feasible that *Brachirus salinarum* Ogilby and *breviceps* Ogilby from Queensland and *Synaptura villosa* Weber from New Guinea may ultimately prove to be synonyms of *selheimi*. The generic name *Brachirus* is pre-occupied and *Synaptura* is of doubtful status. According to Chabanaud (Comptes rendus seances Soc. Biogeogr. 281, 1955, p. 103) Cantor's genus *Synaptura*, in the strict sense, contains six species, the genotype being *commersoni*, a species which Chabanaud had earlier (Bull. Mus. Nat. Hist. Paris (2) ix, 1937, pp. 193 et seq.) regarded as being of very doubtful status, as had also Fowler (Proc. Acad. Nat. Sci. Philad. xci, 1940, p. 383). Originally described from the Isle of France, the species usually regarded as *commersoni* has since been figured by Chabanaud (Arch. Mus. Paris (6) xv, 1938, p. 85, pl. ix, fig. 24, text-figs. 1 & 5-8). The Australian Museum has one of Day's specimens of "*commersoni*" from Sind, India. This elongate species (its depth is less than 30% of its total length), with pointed tail, more numerous and more strongly ctenoid scales, and both lips fimbriated, differs very markedly from *selheimi*.

TRICHOBRACHIRUS? SELHEIMI (Macleay).

(Figure 8.)

Synaptura selheimi Macleay, Proc. Linn. Soc. N. S. Wales vii, 1, May 23, 1882, p. 71. Palmer River, Queensland. Types lost. *Id. ibid.* ix, 1884, p. 51, and of later Australian lists. *Id.* Ogilby, Commerc. Fish & Fisher. Qld., 1916 ed., p. 13; 1954 ed., p. 23. *Id.* Chabanaud, Bull. Soc. Zool. France lix, 1934, p. 434 (may be a *Zebrias*). *Id.* T. C. Marshall, Ichth. Notes iii, 1957, p. 136 (Tate R., Q.). *Id.* Boyes, Brisbane Aquarium Club Monthly Newsletter xiv, 1957, p. 2 (Mitchell R., Q.).

Brachirus selheimi Norman, Biol. Res. Endeavour v, 1926, p. 294.

Zebrias selheimi Whitley, Proc. Roy. Zool. Soc. N. S. Wales 1954-5 (1956), p. 41.

Trichobrachirus selheimi Whitley, Aqua Life ii, Dec. 1957, p. 24, fig. . . .

This species was described from the Palmer River, a tributary of the Mitchell River, north Queensland, three-quarters of a century ago, the types were lost many years ago, and the species was known only from Macleay's description until 1957 when T. C. Marshall (loc. cit.) recorded it from the Tate River, another tributary of the Mitchell. Mr. Marshall very kindly lent me a specimen of this rare sole for figuring. In Brisbane, in June 1957, we both saw a living specimen in Mr. Frank Boyes' aquarium; it had been two years in captivity and was about $2\frac{3}{4}$ inches long; originally it had come from the head waters of the Mitchell River. It usually lies buried in sand but is a very active swimmer when disturbed. At night, it sometimes sticks to the glass of the aquarium by its blind side. Its dark brown head and body changed to yellowish-brown and, like the deep straw-yellow fins, were plentifully speckled with dark sooty spots, those along the lateral line forming a notable row. There were other dark spots on the eyelids and the blind side was milky blue to whitish.

Following is a description of a Tate River fish (Dept. of Harbours and Marine, Brisbane, registered No. 1774), with a diagram.

D. 69; A. 54; P. left 5, right 4; V. 5; C. 15. About 80 scales along straight part of l. lat. to hypural joint, plus a few more on tail; about 100 such scales on blind side.

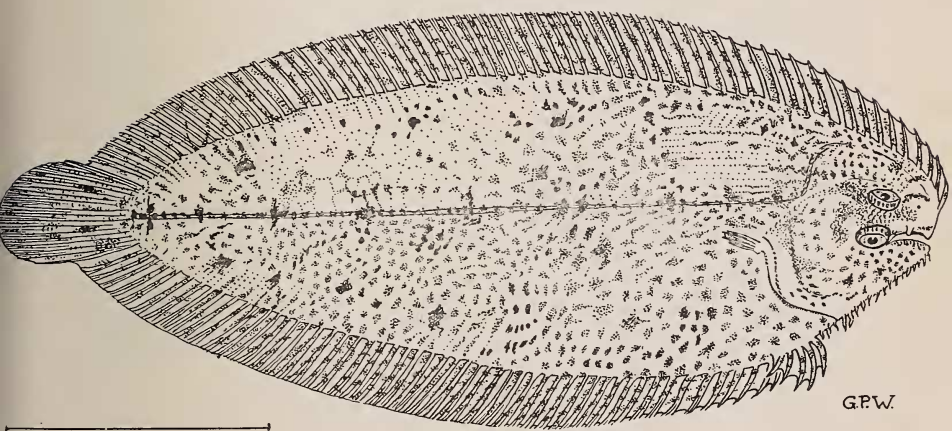


Figure 8.—Freshwater Sole, *Trichobrachirus selheimi*. Tate River, Queensland.

G. P. Whitley del.

Head (15 mm.) 5.2 in standard length or 6.1 in total length (92) or 19% and 16% of same respectively. Depth (29 mm.) 2.7 in, or 37% of, standard length or 3.1 in, and 31% of, total length. Eyes (4) 3.7 in head, Postorbital (9) 1.6 in head. Gape (5 mm. or 4 on blind side) subequal to snout (nearly 5). Length of pectoral fin, 4 mm. on eyed side, 3 on blind side. Length of caudal nearly 19 mm. Standard length 78 mm. Total length 92 mm., nearly 3½ inches.

Snout not produced into a long hook; dorsal rays not extending to its tip. Upper jaw slightly longer than lower. Lower lip fimbriate on eyed side, entire on blind side. Inhalant nostril of eyed side a short tube overhanging upper lip, nearer eye than tip of snout; exhalant nostril just before lower eye. Nostrils of blind side hidden by sensory flaps. Interorbital concave, scaly; five rows of scales between tops of eyes. Upper eye largely in advance of lower which is near rictus; a shallow depression behind upper eye. Interbranchial septum not perforated. Gill-openings wide, united across isthmus. The branchiostegal membrane ends before the pectoral base on the eyed side and overlaps the uppermost pectoral ray on the blind side.

Head, body, and most of fins scaly. Scales of head subequal to those on body, with convex anterior margins. Anterior, lower and posterior surface of blind side of head with skinny papillae. Scales of eyed surface strongly ctenoid; of blind side weakly ctenoid, becoming cycloid anteriorly on head and body. About 27 to 30 rows of scales between lateral line and belly or back, plus small ones on fin bases. Lateral line along middle of sides with steeply ascending pericranial portion. Vent between ventral fins, displaced to left of median axis. Two small urinary papillae, to left of first anal ray and close to anus.

Dorsal fin originating over front of snout at level of upper eye, its tenth ray 6 mm. long and middle ones 7. Anal fin originating between ventrals, 15 mm. from chin; its anterior rays 5 mm. long and middle ones 7. Both pectoral fins developed, though small, with four or five rays. Pectoral of eyed side very slightly longer than diameter of eye, the 2nd and 3rd of its 4 rays longest. Ventral fin each side of median line, slightly asymmetrical, its second ray longest, its base ending before level of pectoral base; its last ray not modified and joined to side of fish by membrane, not to anal fin. Caudal rounded, its rays all branched, like the majority of the unpaired fins' rays, and extending beyond the posterior rays of the dorsal and anal fins, which are united to it by membrane.

Family SOLEIDAE.

Genus LIACHIRUS Gunther, 1862.

Liachirus Gunther, Cat. Fish. Brit. Mus. iv, 1862, p. 479. Haplotype, *L. nitidus* Gunther, from China. *Id.* Ogilby, Mem. Qld. Mus. v, 1916, p. 141. *Id.* Weber & Beaufort, Fish. Indo-Austr. Archip. v, 1929, p. 158. *Id.* Chabanaud, Bull. Mus. Hist. Nat. Paris (2) xxii, 1950, p. 563, especially concluding paragraph.

The following species was discovered in north-western Australia by the late Arthur Livingstone in 1929, but was named (in error) as from "la cote orientale du Queensland, district de Livingstone." The correct type-locality is between Broome and Cape Bossutt, Western Australia.

LIACHIRUS WHITLEYI Chabanaud.

(Figure 9.)

Aseraggodes sp. Whitley, Austr. Mus. Mag. ix. 11, 1949, pp. 383 & 384, fig.

Liachirus whitleyi Chabanaud, Bull. Mus. Hist. Nat. Paris (2) xxii, 5, 1950, p. 563. *Id.* Musgrave, Austr. Journ. Sci., Aug. 1952; Austr. Sci. Abstr. suppl. xxx, 1, 1952, p. 1, ex Whitley, MS. (correct type-loc.).

D. 76; A. 56; P.O.; V. 5; C. 18. L. Lat. 73 from shoulder to hypural + 5 on tail. L. tr. 24/1/24.

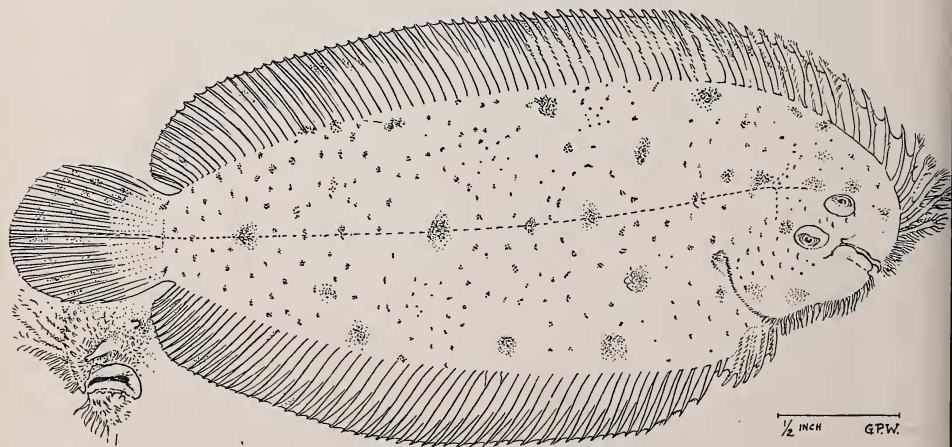


Figure 9.—Bearded Sole, *Liachirus whitleyi*. Holotype. Western Australia. G. P. Whitley del.

Head (18 mm.) nearly 4.3, depth (30) 2.6 in standard length (77) or about one-third of total length (93.) Eyes, 3 mm.; snout, 7; interorbital, 1.6; postorbital, 9; depth of caudal peduncle, 9; caudal fin about 15 mm.

Eyes on the right side, separated by scaly, concave interorbital more than half their diameter. About 7 scales between upper eye and back; 3 to 4 between eyes; 15 postocular. Upper eye level with 1. lat. Lower eye under posterior half of upper. On the eyed side, the anterior nostril has a large tube opening backwards above the lips and before lower eye, and overlying the posterior nostril which opens near the upper lip. On the blind side, the anterior (inhalant) nostril has a long tapering tube over front half of mouth and the posterior (exhalant) nostril is a simple opening above end of mouth; neither is dilated or fimbriated. Snout with a slight hook. Mouth-opening strongly curved, reaching below anterior half of lower eye. No teeth. Lips not fimbriate; on the blind side they are curled and fleshy with a pad of plicae inside the mouth. Anterior edge of head with numerous sensorial fringes. Gill-openings fimbriate on both sides.

Body strongly compressed, covered with cycloid scales (some scales near tail are weakly ciliated) of about the same size on both sides and not extending over fins. Scales of head, breast and back on blind side with sensory filaments; on eyed side without any filaments. Lateral line descending on both sides from near level of upper eye to caudal base, its tubes simple, extending along most of exposed surfaces of scales. It divides into three short branches behind upper eye and above origin of ventral fin but there is no accessory 1. lat. system on top or front of head on either side. Urinary papilla displaced to left side, not scaled behind ventrals.

Dorsal originating at level of lower eye, little above mouth; first few rays largely free of membrane and tasselled; height of dorsal about $3\frac{1}{2}$ in body below it. Anal similar to posterior part of dorsal, its first and last rays short. Fin-rays (except in caudal) simple, those of dorsal, anal and ventrals with broad proximal folds forming backwardly directed scoops, sometimes with short lateral processes. No pores at bases of rays. Pectorals absent. Ventral united to one another and to anal by membranes; the right ventral is slightly larger than the left and its longest rays reach third anal ray. Caudal rounded, most of its rays branched, free from dorsal and anal fins which have no posterior membranes.

Colour, in alcohol, uniform sandy-brown on blind side; eyed side sandy-brown with about seventeen large scattered reddish-brown blotches on head and body and, apart from these, numerous dark brown spots; a few spots extend on fins but the latter are mostly plain. Eyes sandy with some silver near the blue pupil.

Described and figured from the holotype, 93 mm. or $3\frac{3}{4}$ inches overall. Austr. Mus. regd. No. IA.4227.

Loc.—Dredged between Broome and Cape Bossutt, Western Australia, in 5 fathoms, by Mr. A. A. Livingstone in September or October 1929.

LIACHIRUS KLUNZINGERI (Weber).

(Figure 10.)

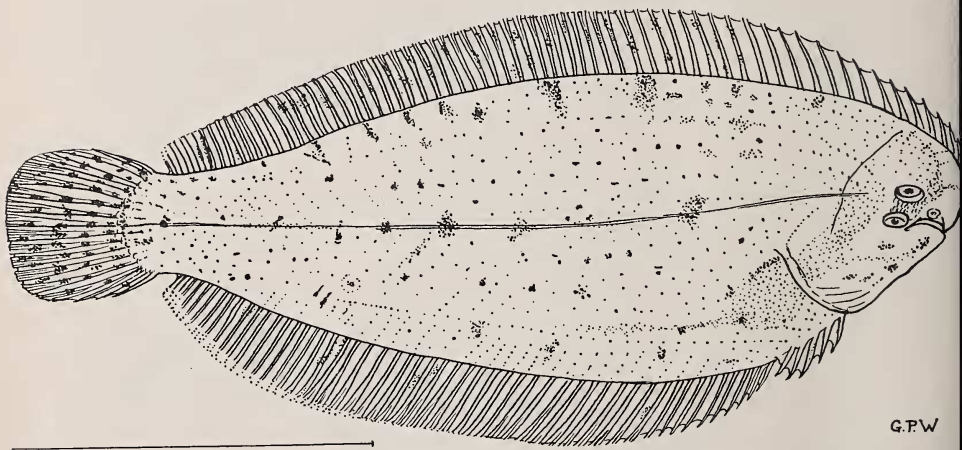
Pardachirus klunzingeri Weber, Nova Guinea v 2, 1908, p. 250, pl. xiii, fig. 2. Merauke River, New Guinea.

Aseraggodes klunzingeri Weber, Nova Guinea ix, 4, 1913, p. 588. *Id.* Weber & Beaufort, Fish. Indo-Austr. Archip. v, 1929, p. 157. *Id.* Chabanaud, Zool. Meded. xiii, 1930, pp. 186 & 190.

Achirus klunzingeri Weber, Siboga Exped. lvii, 1913, p. 417.

Liachirus klunzingeri Glauert, W.A. Nat. vi, 3, Nov., 1957, p. 81. *Id.* Whitley, Aqua Life ii, 8, Dec. 1957, p. 26, fig. . . .

NOT *Pardachirus klunzingeri* Norman, Biol. Res. Endeavour v, 1926, p. 288, footnote, which is referable to *Achirus rautheri* Chabanaud, Zool. Anzeiger xciii, 1931, p. 95, figs. 1-10 from Port Darwin.



G.P.W

Figure 10.—Kimberley Sole, *Liachirus klunzingeri*. North-western Australia.
G. P. Whitley del.

I identify as this species some small soles sent to me from the Ivanhoe Crossing of the Ord River, East Kimberley division, north-western Australia (freshwater) by Mr. L. Glauert.

D. 68; A. 55; P.O.; V. 5/5; C. 3 plus 12 plus 4. L. Lat. c. 80. Tr. c. 23/1/26.

Head (13 mm.) 4.4, depth (22) 2.6 in standard length (58).

Eyes little over 2 mm.; snout 3. Gape, 4 mm. Postocular (7) nearly 54% of head.

Front of head smooth and scaleless. Three rows of scales between eyes. Minute teeth on blind side of jaws. Gill-openings wide, united across isthmus, extending upwards to level of point of chin. Nostril-tubes short and thick. Many short cilia around front of head and operculum of blind side. No barbels around anterior edge of head. On the blind side there is a short extra lateral line along top of back anteriorly, ceasing before deepest part of body and (joined to it above the mouth) another short line lying above the true lateral line. A branch of the latter curves round the mouth and gives off a short branch behind the mouth.

Body deepest at anterior third of fish. On the eyed side the lateral line extends forward nearly to eyes, sending off a dorsal and ventral (operculo-cleithral) branch over the site of the preoperculum. Between this commissure and the hypural joint there are about 72 scales, plus a few more on root of tail. Maximum number of scales on straight part of lateral line 81, and about 80 on blind side. Depth of caudal peduncle equal to postorbital.

Dorsal fin originating on end of snout at level of upper eye. Longest dorsal and anal rays less than half length of head. Dorsal and anal fins free from caudal, united to peduncle by very small membranes, their rays without suprabasal pores. No pectoral fins. Scales extend on some ventral

and caudal rays but leave other fins naked. Most of the dorsal and anal rays appear to be divided, but some are incomplete in my specimens. Ventral origin behind the level of the operculo-cleithral commissure of the lateral line. Adpressed ventral rays reach front anal ones. Ventral fins asymmetrical, the one on the left side of the body smaller than the right which is along the median axis; its third ray is longest and the last very short ray appears to be joined to the body near anus. Caudal rounded, about one-sixth total length.

Colour in preservative: Head, body and tail fin pale brown with numerous dark spots and flecks, some of the larger ones tending to be arranged in rows along body. Dorsal, anal and ventral fins plain or with few dusky blotches.

Described and figured from a specimen 68 mm. or nearly $2\frac{3}{4}$ inches in total length, from freshwater at Ivanhoe Crossing, Ord River, East Kimberley district, Western Australia, received from Mr. L. Glauert of Perth. A smaller example from the same locality has D. 69 and A. 52.

In New Guinea, the species is said to reach $4\frac{3}{4}$ inches.

Family GOBIOMORIDAE.

Genus BELOBRANCHUS Bleeker, 1856.

BELOBRANCHUS BELOBRANCHA (Cuv. & Val.).

Eleotris belobrancha Cuvier & Valenciennes, Hist. Nat. Poiss. xii, March 1837, p. 243. Manado, Celebes.

Belobranchus belobrancha Koumans, Fish. Indo-Austr. Archip. x, 1953, p. 361, fig. 88 (q.v. for refs. & synonym.).

One specimen, 125 mm. long, from Buin, Bougainville Island, Territory of New Guinea; 21 May, 1939, Rev. Father J. B. Poncet, S.M. (Australian Museum regd. No. I.B.381). Native name Buleapa.

Genus CULIUS Bleeker, 1856.

CULIUS ROBUSTUS (De Vis).

(Figure 11.)

Eleotris robustus De Vis, Proc. Linn. Soc. N. S. Wales ix, 3, Nov. 29, 1884, p. 692. Queensland coast. And of Australian lists.

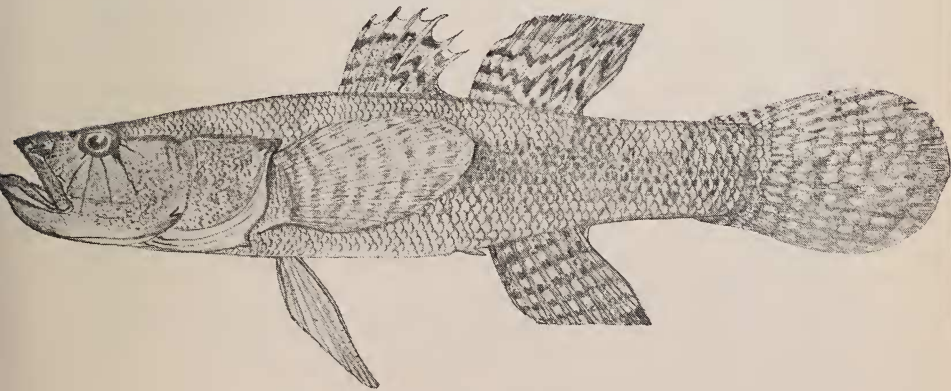


Figure 11.—Gudgeon *Culius robustus*. Queensland.

G. P. Whitley del.

Culius robustus Anon., Brisbane Aquarium Club Monthly Newsletter (roneo), xii, March 1957, p. 2. *Id.* Williams, Australas. Aqua Life ii, 4, 1957, p. 20.

The President of the Brisbane Aquarium Club, Dr. F. W. Whitehouse, has sent many interesting freshwater fishes from Queensland to the Australian Museum. Amongst them were four gudgeons from Innisfail which evidently belong to De Vis's long-lost species. The largest specimen (regd. No. IB.3712) is 78 mm. or slightly more than 3 inches long.

D. vi/i, 8; A. i, 8; P. 16; V. i, 5; C. 14. Sc. 51. Tr. 15 at second dorsal origin. About 40 predorsal scales.

Head (21 mm.) 2.8, depth (14) 4.3, predorsal length (27) 2.2 in standard length (60). Eye 4) 5.2, interorbital (5) 4.2, pectoral length (16) 1.3 in head.

Scales on cheeks and opercles and extending forward to middle of interorbital. A spine on preoperculum. Head criss-crossed by minute papillae in rows which are mostly vertical. Mouth almost reaching below eye. Teeth small and sharp, in bands, some on sides of lower jaw slightly enlarged. Lower lip laterally extensible. Tongue broadly rounded. Nostril flap overhangs lip. Furrow from eye to above pectoral. Gill-openings wide, extending forwards nearly below preoperculum.

General facies of *Culius melanosoma* (Bleeker) but pectoral reaching below origin of second dorsal and different coloration. Fifth ventral ray longest.

Greyish-brown, darkest on interorbital, cheeks and flanks. Fins spotted or chequered black and white with tinges of purple. Dusky blackish blotch at top of opercular flap. Belly plain yellowish-white. Eye blue.

Four specimens show little variation: P. 15-16; Sc. 46-51; Tr. 12-15; and predorsal scales 36 to 42. De Vis says the species reaches $4\frac{1}{2}$ inches in length. Queensland.

Family GOBIIDAE.

Genus GNATHOLEPIS Bleeker, 1874.

GNATHOLEPIS INCONSEQUENS, sp. nov.

Agrees well with the description of *Gnatholepis scapulostigma* Herre (Philip. Journ. Sci., lxxxii, 1953, p. 193) from Eniwetok, but differs in the following respects:

Scales in about 23 series between head and hypural joint. Interorbital (1.9 mm.) 1.3 in eye (2.6) which is 3.8 in head. Caudal (8) 4.4 in standard length (35). No canine teeth. Several vertical rows of small sensory papillae on cheek. The dorsal spines are broken in my specimen. Last dorsal ray not reaching caudal when adpressed. Pectoral extends well beyond level of second dorsal and anal origin. Caudal rounded, less than head.

The colour, because of copper-stained formalin, is green without definite markings, apart from an indistinct dusky bar from below eye to behind mouth and a dark smudge over pectoral axil occupying three scales.

Described from the unique holotype, 35 mm. in standard length or $1\frac{5}{8}$ inches overall. Australian Museum registered No. IB.3916.

Loc.—Heron Island, Capricorn Group, Queensland; Mr. R. Slack-Smith. Collector's No. J.75.

The snub nose, scaly head, and long pectoral fins separate this goby from all the others of Australia.

Family TETRAROGIDAE.

Genus AMBLYAPISTUS Bleeker, 1876.

Amblyapistus Bleeker, Versl. Akad. Amsterdam (2) ix, 1876, p. 297, and xvi, 1876, pp. 5 & 73. New name for *Platypterus* Swainson, 1839, preocc. Orthotype, *Apistus taenionotus* Cuv. & Val., 1829.

Small scorpion-fishes with stinging spines. Typical *Amblyapistus* has tips of anterior dorsal spines well separable by extensive membranes, fin-rays branched and scaly body, according to Bleeker.

PAROCOSIA, subgenus nov.

Orthotype, *Amblyapistus (Parocosia) slacksmithi*, sp. nov.

A Queensland scorpion-fish, distinguished from all the others known from Australia by having 17 dorsal spines, the first originating over front half of eye, and 3 anal spines. Pectoral without free rays. Body naked (a few vestigial scales near lateral line tubes). V. i, 5.

Superficially like *Ocosia* Jordan & Starks (Proc. U.S. Nat. Mus. xxvii, 1904, p. 162), but more elongate, has dorsal origin farther forward, lacks spines on top of head, and base of pectoral is before that of ventral.

AMBLYAPISTUS (PAROCOSIA) SLACKSMITHI, sp. nov.

D. xvii, 8; A. iii, 6; P. 12; V. i, 5; C. 13. L. Lat. 20-23 tubes.

Head (11 mm.) 2.7, depth (10) 3 in. standard length (30).

Upper profile of head concave, steep; lower convex. Lower lip terminal. No barbels. Mouth small, maxilla deep, reaching below front of eye. Teeth villiform, in bands on jaws, vomer and apparently on palatines. Tongue rounded, free. Two nostrils each side, one with small tube. Interorbital strongly convex. Eye longer than deep, its horizontal diameter a trifle more than interorbital width and subequal to depth of caudal peduncle (3 mm.). Some weak ridges along suborbital. Two small hook-like pre-orbital spines, upper reaching above tip of maxillary. A spine at preopercular angle, with two smaller spines below. Two weak opercular spines and a blunt opercular flap. No other spines on top and sides of head and no postocular groove. Gill-openings wide, united across narrow isthmus. Gill-rakers rudimentary.

Form compressed, deeply arched anteriorly, back dipping below posterior dorsal spines, tapering to shallow caudal peduncle. Skin smooth. Body practically naked, scales being microscopically vestigial in places, notably near the spineless tubes of the lateral line, which is parallel with the back and runs along middle of side of caudal peduncle with its tubes separated before the tail. An arched branch of the l. lat. ascends head behind eye, around which are some pores. No dermal flaps. Vent a little distance ahead of anal fin.

Dorsal fin continuous, originating over front half of eye, its first spine short, second longest (7.5 mm.), spines thence decreasing, rising and dipping again before the soft dorsal fin (longest, sixth, ray, 6.5 mm.), the last ray of which is joined by membrane to proximal part of uppermost caudal ray. Anal origin below posterior dorsal spines and tip of pectoral. Anal spines strong, increasing in length to third (6.5 mm.), its third and fourth rays longest, its base (8 mm.) greater than its height. Pectoral without free rays, all rays simple. Ventrals with a strong spine and five unbranched rays, united by membrane to body, their origin behind level of pectoral base. Caudal of irregular rhomboid outline, middle rays longest, all rays simple.

Colour (in formalin): Brown in varying tones. Head and posterior half of body dark brown; intermediate body-area cream to light brown, junctions of tones irregular, some of the dark brown extending along

back and lateral line. A silvery spot on anterior third of lateral line. Breast and belly whitish. Front of head milky-white from chin to dorsal origin. A cream dumb-bell-like blotch below each cheek. Fins creamy to light brown, irregularly streaked or mottled with darker brown; no conspicuous dark spot on spinous dorsal. Pectoral, ventral, and caudal fins with denser, dark, lacework-like mottling and all white-tipped. No axillary pattern.

Described from the unique holotype, $1\frac{1}{2}$ inches long (standard length 30 mm., total length 38). Australian Museum regd. No. 1B.3893. Collector's no. 51-25-3.

Loc.—Heron Island, Capricorn Group, Queensland; Mr. R. Slack-Smith, after whom I have pleasure in naming this species.

Rather like *Amblyapistus binotatus* (Peters) as illustrated in Smith's "Sea Fishes of Southern Africa," but outline of first dorsal more peaked and 17 dorsal spines. The dorsal outline is more like that of *A. macracanthus* as figured in Day's "Fishes of India" but that has D. xvi, 9, more anal rays, longer anal base, and branched fin-rays. Bleeker's 1876 figure of his *macracanthus*, illustrated again in his "Atlas Ichthyologique," has dorsal beginning before eye and with sail-like membranes as in *crista-galli* Gunther, 1860. My fish is more like the Bali "*Amblyapistis tacnianotus*" figured by Fowler (Proc. Acad. Nat. Sci. Philad. lxxxvi, 1934, p. 77, fig. 19).

The new species is distinguished by its white face, form and formulae of fins, practically naked body, and simple fin-rays.

Family TRIGLIDAE.

Genus PARATRIGLA Ogilby, 1911.

AQYAGICHTHYS, subgen. nov.

Orthotype, *Trigla vanessa* Richardson (Proc. Zool. Soc. Lond. 1839, p. 97) = *Paratrigla (Aoyagichthys) vanessa*.

Differs from typical *Paratrigla* in having D. x/16 to xi/17; A. 15 to 17 (instead of D. ix/14 to 15; A. 14 or 15) and greater total length ($12\frac{1}{2}$ inches maximum instead of from $4\frac{1}{2}$ to 7), and from *Lepidotrigla* Gunther, 1860, in having spined scutes along lateral line as well as along both sides of both dorsal fins. The interorbital is deeply concave and the pectoral fin is equal to or longer than the length of the head.

Named after the esteemed Japanese ichthyologist Hyozi Aoyagi.

PARATRIGLA (AQYAGICHTHYS) VANESSA (Richardson).

A record-sized specimen, $12\frac{1}{2}$ inches long, was trawled by the Red Funnel Trawlers in southern New South Wales in January, 1958, and sent to the Australian Museum from the Sydney Fish Markets by Mr. J. C. Woore (regd. No. 1B.3903). New record for New South Wales. The species which may be called the Admiral Gurnard, because *vanessa* is the name of the Admiral Butterfly, was previously known from South Australia, Victoria, Tasmania, and New Zealand. It is featured in Waite's "Fishes of South Australia."

Genus LEPIDOTRIGLA Gunther, 1860.

LEPIDOTRIGLA SPILOPTERA Gunther.

Lepidotrigla spiloptera Gunther, Rept. Voy. Challenger, Zool. i, 6, 1880, p. 42, pl. xviii, fig. C; *ibid.* xxii, 1887, p. 64. Ki Island, Arafura Sea. *Id.* Alcock, Zool. Investigator, Fishes, 1899, p. 67. *Id.* Weber, Siboga Exped., Fische, 1913, p. 511. *Id.* Matsubara & Hiyama, Journ. Imp. Fisher. Inst. xxviii, 1932, pp. 16 & 38, fig. 14.

(misprinted *spiroptera*). *Id.* Kuronuma, Bull. Biogeogr. Soc. Japan ix, 1939, p. 237, fig. 4, and of other Japanese authors. *Id.* Herre & Kauffman, Proc. Biol. Soc. Wash. lxxv, 1952, p. 29.

Lepidotrigla grandis Ogilby, New Fish. Qld. Coast, 1910, p. 122 (reprint of a suppressed paper). Off Cape Moreton, Queensland; 73 faths. Cotype in Austr. Mus. *Id.* McCulloch & Whitley, Mem. Qld. Mus. viii, 1925, p. 165 (listed).

A cotype of *Lepidotrigla grandis* Ogilby, 1910, in the Australian Museum (No. I.12512) is 200 mm. in total length. Ogilby's name is evidently a new synonym of *L. spioptera* Gunther.

This species is thus now known from Queensland to the Arafura and Timor Seas, Indonesia, Japan, the Philippines and India.

Family BLENNIIDAE.

Genus GRAVICEPS Fowler, 1903.

The following new species differs from the genotype (*Petroscirtes elegans* Steindachner) and its congeners in fincounts and its distinctive coloration.

GRAVICEPS DARWINI, sp. nov.

Because next year sees the centenary of the publication of the great Charles Darwin's *Origin of Species*, and because this beautiful new blenny comes from Port Darwin in the Northern Territory of Australia, I name it *darwinii*.

D. 12 + 19 = 30; A. 2 + 21 = 23; P. 13; V. 2; C. 11 main rays. L. lat. 11 tubes, extending to below 7th dorsal spine, obsolete posteriorly.

Head (9 mm.) 3.5, depth (6) 5 in standard length (32) or 4.1 and 6.1 in total length (37) respectively. Eye (2) equal to snout, slightly exceeding the rather flat interorbital.

Head without tentacles or occipital crest. Mouth slightly inferior with about two dozen teeth in each jaw flanked by a canine, largest in lower jaw. Gill opening a short, curved, oblique slit above level of pectoral base. Dorsal fin originating over opercular flap. Eleven dorsal spines, slightly shorter than the following rays, the longest of which (4.55 mm.) is less than postorbital (5).

Anal fin about as high (3 mm.) as anterior dorsal rays. Dorsal and anal fins attached by membranes to base of caudal, not to the fin proper. Pectorals (6 to 7 mm.), shorter than head; ventrals (6 mm.) longer than postorbital. Caudal rounded.

Colour in alcohol, light brown with a series of broad darker bands or chevrons down sides of head, but not joining across isthmus; the first runs from eye to mouth, the second drops from the eye and curves backward below, the third runs from nape to below head via behind the eye, the fourth and fifth across the gill-covers, and the sixth runs down pectoral base; these alternate with upright rows each of about four dark brown spots. Top of head with large dark spots.

Indistinct dusky patches along middle of body; about 14 dark brown blotches along back below dorsal fin, these extend along some of the dorsal membranes as fuscous bars.

Dorsal and caudal fins with obscure oblique dusky bars along some of their membranes. Anal fin infuscated; other fins plain, but a small dark spot over bases of upper pectoral rays.

Described from the unique holotype, a specimen 37 mm. or nearly 1½ inches in total length (Austr. Mus. regd. No. IA.4298).

Loc.—Port Darwin, Northern Territory of Australia; collected by Mr. Arthur A. Livingstone in 1929.

It is perhaps related to *Salarias furcatus* De Vis (Proc. Linn. Soc. N.S.W. ix, 1884, p. 696) from Moreton Bay, Queensland, which seems to have a different colour-pattern, forked tail and more dorsal rays, but I have no specimen of De Vis' species. In Chapman's key in Weber & Beaufort (Fish. Indo. Austr. Archip. ix, 1951, pp. 357-359) the Darwin fish comes nearest *Petroscirtes kochi* (Nova Guinea v, 2, 1908, p. 263) from Merauke, New Guinea, but Weber's species differs considerably in proportions apart from coloration. It is more like *Petroscirtes lineolatus* Kner (Sitzungsber. Akad. Wiss. Wien, lviii, 1868, p. 331 (39) pl. vi, fig. 17 from Candavu, Fiji) but the oblique bars on the head run from the vertex towards the front in my species with few spots between them, whereas in *lineolatus* they run from the eye downwards and backwards and have more numerous dark spots between them, and the pectoral base is darker and the dusky bars of the dorsal and anal fins cut across the rays more.

Genus ISTIBLENNIUS Whitley, 1943.

ISTIBLENNIUS EDENTULUS (Bloch & Schneider).

- Blennius edentulus* Bloch & Schneider, Syst. Ichth., 1801, p. 172 and as *B. truncatus*. Huaheine, Pacific Ocean.
- Salarias rivulatus* Ruppell, Atlas Rupp., Reise (Senckenb. Nat. Ges.), Fische, 1830-31, p. 114. Tor, Red Sea.
- Salarias forsteri* Cuv. & Val., Hist. Nat. Poiss. xi, 1836, p. 315. Huaheine. *Id.* Richardson, Rept. 12th meet. Brit. Assn. Adv. Sci. 1842 (1843), p. 24. "Australia" [= Huaheine].
- Salarias quadricornis* Cuv. & Val., Hist. Nat. Poiss. xi, 1836, p. 329, pl. 329. Isle-de-France. *Id.* Waite, Trans. Roy. Soc. S. Austr. xl, 1916, p. 454 (Lord Howe and Norfolk Iss.).
- Blennius cinereus* Castelnau, Res. Fish. Austr., 1875, p. 26. Queensland. And of Australian lists.
- Salarias edentulus* Gunther, Journ. Mus. Godeff. iv, 13 (Fische Sudsee vi), 1877, p. 206, pl. cxvii, fig. A (and as *quadricornis* on p. 209, fig. B). *Id.* Chapman, Fish. Indo-Austr. Archip. ix, 1951, p. 328 (q.v. for refs. & synon.).
- Salarias atratus* Macleay, proc. Linn. Soc. N. S. Wales vii, 1882, p. 361. Port Moresby, Papua. And of lists. *Id.* Chapman, Fish. Indo-Austr. Archip. ix, 1951, p. 346. *Id.* Whitley, Proc. Roy. Zool. Soc. N. S. Wales 1952-3 (1954), p. 28 (N. S. Wales).
- Salarias rivulatus* Jordan & Starks, Ann. Carneg. Mus. xi, 1917, p. 460. *Id.* McCulloch & McNeill, Rec. Austr. Mus. xii, 1918, p. 15, pl. iii, figs. 3-4. *Id.* McCulloch, Rec. Austr. Mus. xiv, 1923, p. 125. *Id.* Whitley, Rec. Austr. Mus. xvi, 1928, p. 303.
- Istiblennius edentulus* Norman, Ann. Mag. Nat. Hist. (11) x, 1943, pp. 811-812. *Id.* Inger, Pacific Science ix, 1955, p. 298.

Blennius cinereus Castelnau, 1875, is a common synonym of *edentulus*; another synonym, as was demonstrated by McCulloch in 1923, is *Salarias atratus* Macleay, 1882.

Family TEUTHIDAE.

Genus TEUTHIS Linne, 1766.

TEUTHIS NIGRORIS (Cuv. & Val.)

Acanthurus nigroris Cuvier & Valenciennes, Hist. Nat. Poiss. x, Sept. 1835, p. 208. Sandwich Islands. *Id.* Randall, Pacific Science x, 1956, p. 187, figs. 1, 2 & 12 (q.v. for refs. & Synon.).

One specimen, 136 mm. in standard length, from Heron Island, Queensland; from Mr. R. Slack-Smith.
New record for Australia.

Family CERATIIDAE.

Genus CRYPTOPSARAS Gill, 1883.

CRYPTOPSARAS PENNIFER Regan & Trewavas.

(Figure 12.)

Cryptosaras pennifer Regan & Trewavas, Dana Rept. ii, 1932, p. 98, fig. 157. North of New Zealand. New South Wales.

Cryptosaras pennifer Whitley, Fish. N.S.W. (McCulloch), ed. 3, 1934, suppl. *Id.* Graham, Treasury N.Z. Fish., ed. 2, 1956, p. 413.

Cryptosaras couesi pennifer Bertelsen, Dana Rept. xxxix, 1951, pp. 143, 272, etc., figs. 93a, f, & g. and 95 l & m.

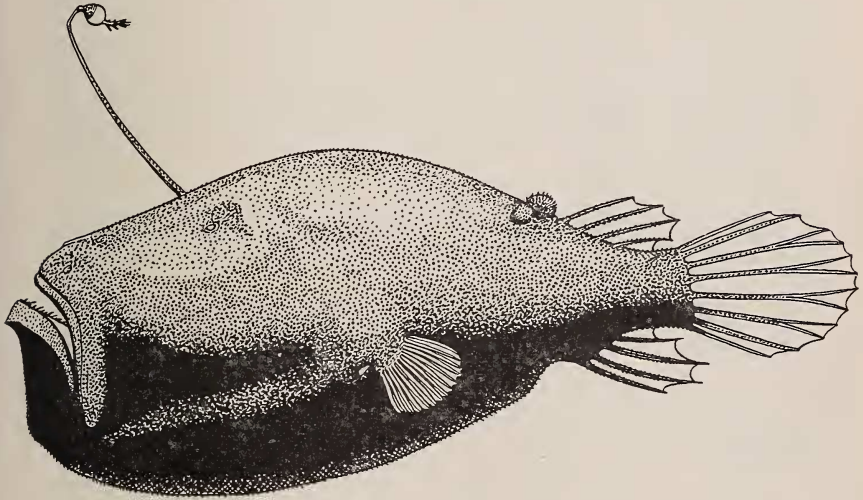


Figure 12.—Deepsea Angler Fish, *Cryptosaras pennifer*. Cotype. Tasman Sea.

A. Fraser-Brunner del.

The accompanying figure is of a cotype, kindly drawn for me some years ago by Mr. A. Fraser-Brunner. The only illustrations of the Australasian species hitherto published have been of the escae or of larval specimens.

Family ANTENNARIIDAE.

Genus ANTENNARIUS Daudin, 1816.

ANTENNARIUS COCCINEUS (Lesson, 1831).

D. $i/i/i/12$; A. 8 (9); P. 10; V. 6; C. 9.

Head (17 mm) 2.6, depth (27) 1.6, and width (20) 2.2 in standard length (44). Eye, 4 mm.; snout, 4.5; interorbital, 6; maxilla, 11; stalk of illicium, 4; depth of caudal peduncle, 6.5.

Maxillary very steep, not reaching below eye, its expansion covered by skin. Lower lip terminal. Small, backwardly-directed, movable, conic

teeth on jaws, in several rows anteriorly, fewer laterally. Sharp teeth on palatines. Tongue bulbous. Rounded preorbital lobe overlaps premaxillary each side. Interorbital broadly convex. Nostrils pore-like. No conspicuous dermal flaps on head, body, dorsal spines, or fins. Gill-openings pore-like, at pectoral elbow.

Body covered with prickles, forming a low pile. Skin little flexible. Lateral line developed around eyes, preoperculum, chin and mouth, less conspicuous on body.

Stalk of illicium smooth and slender, its base distant an eye-diameter from mouth-opening. Esca a small white bulb directed upwards and forwards. Second dorsal spine short (4 mm.), blunt and prickly, widened at its end, and with a membrane. No illicial trough. Third dorsal spine, curved, prickly, fused with back. Some of the posterior dorsal rays longest, about 7 mm., most of them simple but some posterior ones bifid. Last ventral and most of anal and caudal rays divided. Anal fin opposite posterior half of soft dorsal fin and, like it, separated from caudal fin by a very short peduncle. Anal fin lower than soft dorsal. Caudal rounded or irregularly rhomboid, its middle rays 13 mm. long. Pectorals moderately incised. Ventrals stumpy.

Colour in formalin: Pale yellow with sparse greyish brown markings. Eye blue. Second dorsal mostly dark grey. Illicium grey and white banded. Esca white. Ventral surface plain yellow except for four dark dots across throat.

Described from a specimen 61 mm. or about 2½ inches long. Austr. Mus. regd. No. 1B.3843.

Loc.—Noumea, New Caledonia, 1957. Dr. R. Catala's No. 16.

The small illicium and hidden third dorsal spine are useful diagnostic characters.

Near *A. drombus* Jordan and Evermann (Bull. U.S. Fish. Comm. xxii, 1902 (1903), p. 207 and xxiii, 1903 (1905), p. 521, pl. lxiv. Honolulu), but that species has P. 12, maxillary reaching below eye, top of head with rather large concave pit, and third dorsal spine depressible and with a membrane. Typical *Chironectes coccineus* Lesson (Voy. Coquille, Zool., ii, 1831, p. 143, pl. xvi, fig. 1. Mauritius), is fiery red in colour. *Chironectes nummifer* Cuvier (Mem. Mus. Hist. Nat. Paris, iii, Oct. 1817, p. 430, pl. xvii, fig. 4. No locality) has third dorsal spine erectile and with membrane and has a large round brown spot on the dorsal. *Chironectes reticulatus* Eydoux and Souleyet (Voy. Bonite, Zool. i, 1842, p. 186, pl. v, fig. 2. Hawaiian Islands) has dark reticulations over body and dark bars on tail.

ANTENNARIUS GLAUERTI Whitley.

Antennarius glauerti Whitley, W.A. Nat. v, 1957, p. 207, fig. Exmouth Gulf, W.A.

One specimen 60 mm. long from Hayman Island, submitted by Mr. K. de Witte in 1957, constitutes a new record for Queensland.

The anal fin is lower than that of the type and has 9 rays, and there are no long dermal filaments on head, body, and fins.

Family BALISTIDAE.

Genus PSEUDOBALISTES Bleeker, 1865.

Pseudobalistes Bleeker, Atlas Ichth. v, 1865, pls. 218 & 224; Ned. Tijdschr. Dierk, iii, 1866, p. 11. Orthotype, *Balistes flavimarginatus* Ruppell.

PSEUDOBALISTES FLAVIMARGINATUS Ruppell.

Balistes flavimarginatus Ruppell, Atlas zu Ruppell, Reise (Senckenb. Nat. Ges.), Fische (12), 1829, p. 33 and Neue Wirbelth. Abyssin. Fisch, 1837, p. 54, pl. xv, figs. 1-2. Djetta, Red Sea. *Id.* Macleay, Proc. Linn. Soc. N. S. Wales vii, 1883, p. 595 (New Guinea). *Id.* Kamohara, Fauna Nippon. xv, 2, 3, 1940, p. 45, fig. 21. And of authors.

Melichthys marginatus Swainson, Nat. Hist. Classif. Fish. Amphib. Rept. ii, 1839, p. 325. On Ruppell.

Balistes beeri Bleeker, Act. Soc. Indo-Neerl. viii, 1860, p. 53. Celebes.

Balistes (*Pseudobalistes*) *flavimarginatus* Bleeker, Atlas Ichth. v, 1869, p. 113, pl. 218, fig. 3 (young) and pl. 224, fig. 3 (adult); plates published 1865.

Balistes papuensis Macleay, Proc. Linn. Soc. N. S. Wales viii, 1883, p. 279. Hood Bay, Papua. New Synonym. *Id.* Fowler, Mem. Bish. Mus. xi, 1934, p. 448. *Id?* Seale, Proc. Calif. Acad. Sci. (4) xxi, 1935, p. 375. *Id.* Fraser-Brunner, Ann. Mag. Nat. Hist. (10) xv, 1935, p. 662 in genus *Rhinecanthus*.

Balistapus papuensis Jordan & Seale, Bull. U.S. Bur. Fisher. xxv, 1905 (1906), p. 363 (listed).

Pseudobalistes flavimarginatus Clark & Gohar, Publ. Mar. Biol. Stat. Al Ghardaqa viii, 1953, p. 30, figs. 6 a-b.

New synonym: A specimen (No. I.9110), 116 mm. in total length, in the Australian Museum was labelled "Co-type (Type?)" of *Balistes papuensis* from Hood Bay, Papua. This is evidently a young *Pseudobalistes flavimarginatus* (Ruppell).